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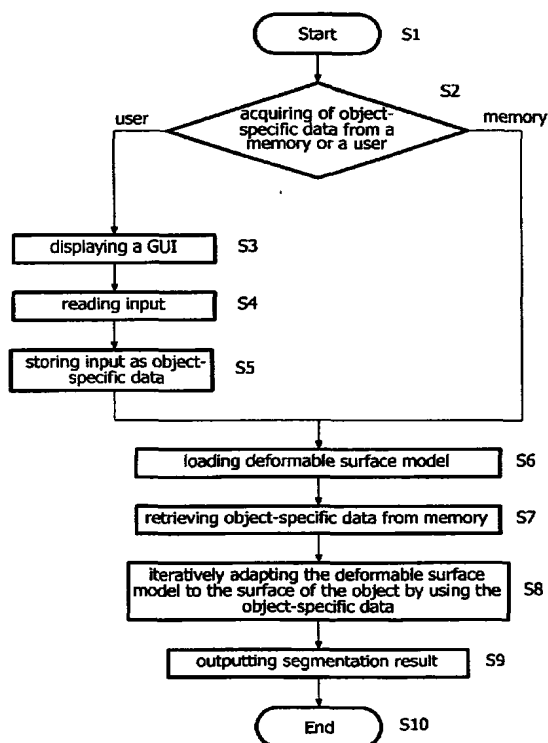
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[Continued on next page]

(54) Title: OBJECT-SPECIFIC SEGMENTATION



(57) Abstract: The invention relates to the field of efficient segmentation of collections of anatomical structures in medical imaging. For example, in radiotherapy planning, the segmentation of a collection of several anatomical structures, which represent the target volume in risk organs is required. When using model based segmentation, organ models represented by flexible surfaces are adapted to the boundaries of the object of interest. According to an aspect of the present invention, object-specific a priori information is incorporated in the segmentation process, which allows to provide for an improved segmentation. Furthermore, the segmentation process according to the present invention, may have an improved robustness, also the time required for the segmentation maybe reduced.

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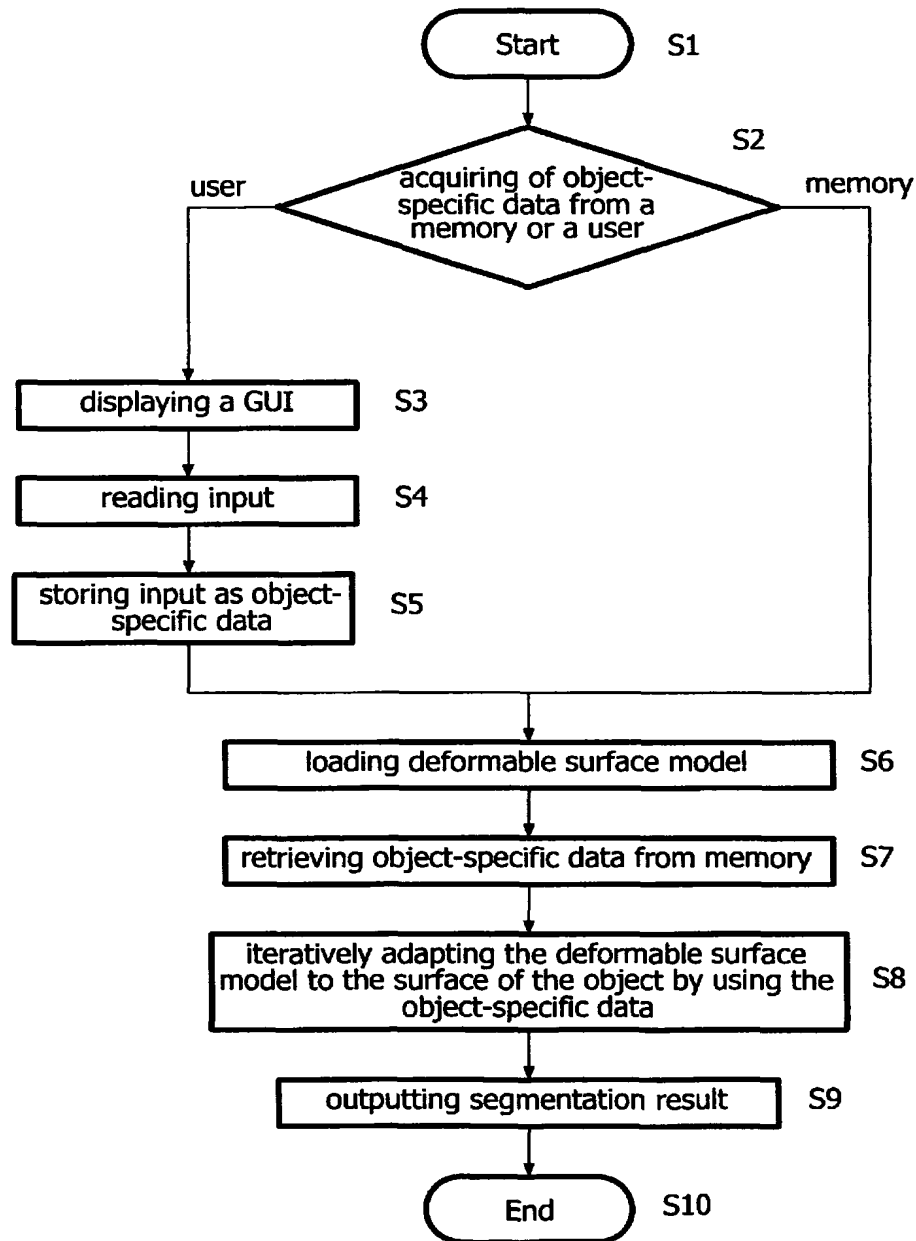


FIG. 2

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB2004/051208A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 G06T5/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 G06T

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, INSPEC

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>WEESE J ET AL: "SHAPE CONSTRAINED DEFORMABLE MODELS FOR 3D MEDICAL IMAGE SEGMENTATION"</p> <p>LECTURE NOTES IN COMPUTER SCIENCE, SPRINGER VERLAG, NEW YORK, NY, US, vol. 2082, 18 June 2001 (2001-06-18), pages 380-387, XP009027152</p> <p>ISSN: 0302-9743</p> <p>cited in the application</p> <p>the whole document</p> <p>-----</p> <p>-/--</p>	1-4,6-10



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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## INTERNATIONAL SEARCH REPORT

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 PCT/IB2004/051208

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>TSAGAAN B ET AL: "Segmentation of kidney by using a deformable model"</p> <p>PROCEEDINGS 2001 INTERNATIONAL CONFERENCE ON IMAGE PROCESSING. ICIP 2001. THESSALONIKI, GREECE, OCT. 7 - 10, 2001, INTERNATIONAL CONFERENCE ON IMAGE PROCESSING, NEW YORK, NY : IEEE, US, vol. VOL. 1 OF 3. CONF. 8, 7 October 2001 (2001-10-07), pages 1059-1062, XP010563536</p> <p>ISBN: 0-7803-6725-1</p> <p>the whole document</p>	1-4,6-10
X	<p>COOTES T F ET AL: "USE OF ACTIVE SHAPE MODELS FOR LOCATING STRUCTURES IN MEDICAL IMAGES"</p> <p>IMAGE AND VISION COMPUTING, GUILDFORD, GB, vol. 12, no. 6, July 1994 (1994-07), pages 355-365, XP009020099</p> <p>ISSN: 0262-8856</p> <p>cited in the application</p> <p>page 356 - page 360</p>	1,2,9,10
A	<p>KOBASHI M ET AL: "Knowledge-based organ identification from ct images"</p> <p>PATTERN RECOGNITION, ELSEVIER, KIDLINGTON, GB, vol. 28, no. 4, 1 April 1995 (1995-04-01), pages 475-491, XP004013165</p> <p>ISSN: 0031-3203</p> <p>page 478 - page 479</p>	1-5
A	<p>MCINERNEY T ET AL: "Deformable Models in Medical Analysis: A Survey"</p> <p>MEDICAL IMAGE ANALYSIS, OXFORDUNIVERSITY PRESS, OXFORD, GB, vol. 1, no. 2, June 1996 (1996-06), pages 91-108, XP002230283</p> <p>ISSN: 1361-8423</p> <p>cited in the application</p> <p>the whole document</p>	1-5,8